

REMARKS/ARGUMENTS

Favorable reconsideration of this application as currently amended and in view of the following remarks is respectfully requested.

Claims 1-3, 5-20, 31, and 32 are currently active in this case. Claims 1 and 16 have been amended and claims 31 and 32 have been added by the current amendment. No new matter has been added. See, by way of non-limiting example, page 19, lines 11-24 of the Specification.

In the outstanding Office Action, Claim 1-3 and 5-20 were rejected under 35 USC 103(a) as being unpatentable over Kruger in view of Unger et al.

The present invention (claim 1 as amended) is directed to a non-invasive imaging apparatus including a light generating unit configured to output light at a plurality of wavelengths *and to multiplex the output light on a single optical axis*; a light irradiation unit configured to irradiate the light generated by the light generating unit into a subject to be examined; a waveguide including a plurality of optical fibers, and configured to guide the light generated by the light generating unit to the irradiation unit; and electroacoustic transducer elements including a plurality of two-dimensionally arrayed conversion elements configured to convert acoustic waves from the subject into electrical signals. The plurality of optical fibers are two-dimensionally laid in gaps between said plurality of conversion elements such that each optical fiber is surrounded by four adjacent conversion elements.

The Official Action acknowledges on page 3 that Kruger fails to disclose (i) “using optical fiber for the waveguide means and does not explicitly disclose a plurality of waveguides in the handheld unit” or (ii) “the plurality of optical fibers arranged in the intervals between horizontally and vertically arrayed transducer elements and that each optical fiber is surrounded by four adjacent conversion elements.” Applicants agree. Applicants respectfully submit that Kruger also fail to teach a light generating unit configured

to output light at a plurality of wavelengths and *to multiplex the output light on a single optical axis*. Kruger merely teaches that electromagnetic energy is supplied by an external source. See para. [0030] of Kruger.

Figures 2A-2C of Unger et al. depict alternative arrangements for coupling optical energy from a light source to a fiber optic coupler[s]. Fig. 2A illustrates a laser outputting a single wavelength of light. Fig. 2B uses a white light source 50 in conjunction with a chopper 60 to generate a plurality of wavelengths. However, the plurality of wavelengths of light are not provided on a single optical axis. Lastly, Fig. 2C uses a plurality of lasers 14A, 14B, and 14C each of which outputs optical energy at a different wavelength. However, Fig. 2C also does not illustrate or suggest that the light output from the lasers is provided on a single optical axis. Thus, Unger et al. does not remedy the deficiencies of Kruger.

In view of the foregoing, Kruger is not believed to anticipate or render obvious the subject matter defined by claim 1 when considered alone or in combination with Unger et al.

Claim 16 is directed to a non-invasive subject imaging method and similar to claim 1 defines outputting light at a plurality of wavelengths and multiplexing the output light on a single optical axis. Thus, claim 16 is also believed to be allowable.

The active dependent claims are believed to be allowable for at least the same reasons the respected independent claims are believed to be allowable. In particular, newly added dependent claim 31 provides that the light generating unit comprises a multiplexing unit configured to multiplex the light output at the plurality of wavelengths on a single optical axis. Newly added dependent claim 32 further defines that the light generating unit is an optical parametrical oscillator laser.

In view of the foregoing no further issues are believed to remain. An early and favorable action is therefore respectfully requested.

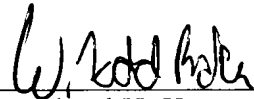
Respectfully submitted,

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